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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/076,423	02/19/2002	Keigo Banno	Q68513	9297	
7	590 04/08/2004	EXAMINER			
SUGHRUE MION, PLLC 2100 Pennsylvania Avenue, NW Washington, DC 20037-3213			KWOK, HELEN C		
			ART UNIT	PAPER NUMBER	
washington, 1	C 20037-3213		2856	· · · · · · · · · · · · · · · · · · ·	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary Examiner			A 12 42 .	<u> </u>	T. A. 11 44 3				
Examiner Helen C. Kwok Art Unit Helen C. Kwok As HORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MALING DATE OF THIS COMMUNICATION. Educations of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filled actes 50 (c) MONTH5 from be mailing date of this communication. If the period for reply sepecified above is less than thirty (30) days, a reply within the statistory minimum of help (30) days will be considered filmely. If the period for reply sepecified above is less than their (30) days, a reply within the statistory minimum of help (30) days will be considered filmely. If the period for reply sepecified above is less than their (30) days, a reply within the statistory minimum of help (30) days will be considered filmely. If the period for reply sepecified above is less than their (30) days, a reply within the statistory minimum of help (30) days will be considered filmely. If the period for reply sepecified above is less than their (30) days, a reply within the statistory minimum of help (30) days will be considered filmely. If the period for reply sepecified above is less than their (30) days, a reply within the statistory minimum of help (30) days will be considered filmely. If the period for reply sepecified above is less than their (30) days, are reply liked, may reduce any send patient them adjustment. Send 7 CFR 1.704(b). Status 1 ∑ Responsive to communication(s) filled on 2 December 2003. 2a) This action is FINAL. 2b) This action is non-final. 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) Claim(s) 1-9 is/are pending in the application. 4a) Claim(s) 1-9 is/are allowed. Claim(s) 1-9 is/are allowed. Claim(s) 1-9 is/are allowed. Claim(s) 1-9 is/are rejected. 7) Claim(s) 1-9 is/are rejected. 7) Claim(s) 1-9 is/are allowed. Bereal of			Application	No.	Applicant(s)				
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1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 5) Notice of Informal Patent Application (PTO-152) 6) Other:	1) Notice 2) Notice 3) Inform	ce of References Cited (PTO-892) ce of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO-1449 or PTO/SB/08)) !	Paper No(s)/Mail D Notice of Informal F	ate	O-152)			

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DETAILED ACTION

Drawings

1. The proposed drawing filed December 2, 2003 is objected. First of all, the Examiner appreciates the reference numerals added to each of the block elements. However, at the same time, the block elements should also include its description within the block elements whereas the filed proposed drawingdeleted these descriptions. The Examiner apologizes if she caused any confusion. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abevance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,568,281 (Sato et al.).

Sato et al. discloses an ultrasonic wave propagation time measuring method comprising, as illustrated in Figures 3, 8, 10, 12, an ultrasonic wave transmitted by an

ultrasonic element 5 or 5a; a reflection wave received as a reception wave by the same or different ultrasonic element 5b; a period of time between transmission of the ultrasonic wave and reception of the reception wave is measured as a propagation time (column 9, line 66 to column 10, line 2) further comprising a reference value setting step comprises subjecting the reception wave to full-wave rectification 31 to obtain a fullwave rectified wave; integrating 37 the full-wave rectified wave or a portion of thereof to obtain an integral value; setting a reference value 39,41 based on the integral value; and a propagation time measurement step 43 comprises determining an arrival time of the reception wave by the reference value. (See, column 9, line 39 to column 12, line 41).

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With regards to claim 2, Sato et al. suggests measuring a point in time when the reception wave has reached the reference value to thereby determine an arrival time in the propagation time measurement step. (See, column 15, lines 23-53; Figure 10).

With regards to claim 3, Sato et al. teaches integrating 37 the full-wave rectified wave to obtain an integral value and measuring a point in time when the integral value has reached the reference value as an arrival time in the propagation time measurement step. (See, column 11, lines 31-41; Figures 3,8).

With regards to claims 4-9, Sato et al. further disclose utilizing the ultrasonicwave propagation-time measuring method as a gas concentration sensor within an intake pipe or canister purge line of an internal combustion engine. (See, column 7, line 15 to column 8, line 25).

Response to Amendment

4. Applicant's arguments with respect to claims 1-9 have been considered but are most in view of the new ground(s) of rejection.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The reference cited is related to a method and apparatus for controlling an air fuel ratio using a gas concentration sensor.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen C. Kwok whose telephone number is (571) 272-2197. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2856

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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hck April 2, 2004